PERPENDICULAR MAGNETIC RECORD MEDIUM AND ITS PRODUCTION

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Abstract

PROBLEM TO BE SOLVED: To reduce medium noise in recording and reproduction and to improve characteristics of reproduction output voltage to recording density by sequentially forming a soft magnetic film having a crystal structure with a body-centered cubic lattice as a space lattice and having designated lattice planes as oriented faces and a perpendicularly magnetized film having a crystal structure with a hexagonal close-packed lattice as a space lattice.
SOLUTION: A soft magnetic film 13 of 'Sendust(R)' and a perpendicularly magnetized film 14 of CoCrTa consisting of 78 at.% Co, 19 at.% Cr and 3 at.% Ta and having a hexagonal close-packed lattice as a space lattice are successively formed on a glass substrate 12 to obtain the objective perpendicular magnetic record medium 11. The temp. of the substrate is set at 200 deg.C in forming the Sendust film, the Sendust film has lattice planes (200) as oriented faces and the half-width &Delta &theta 50 of the CoCrTa film is halved as compared with that at <200 deg.C temp. of the substrate when forming the Sendust film. The lattice matchability of the lattice planes (200) of the Sendust film and the lattice planes (001) of the CoCrTa film is satisfactory and high quality and high recording density are easily attained.